C. EWING.
Bale-Tie.

No. 203,255. Patented May 7, 1878.

Fig. 1.

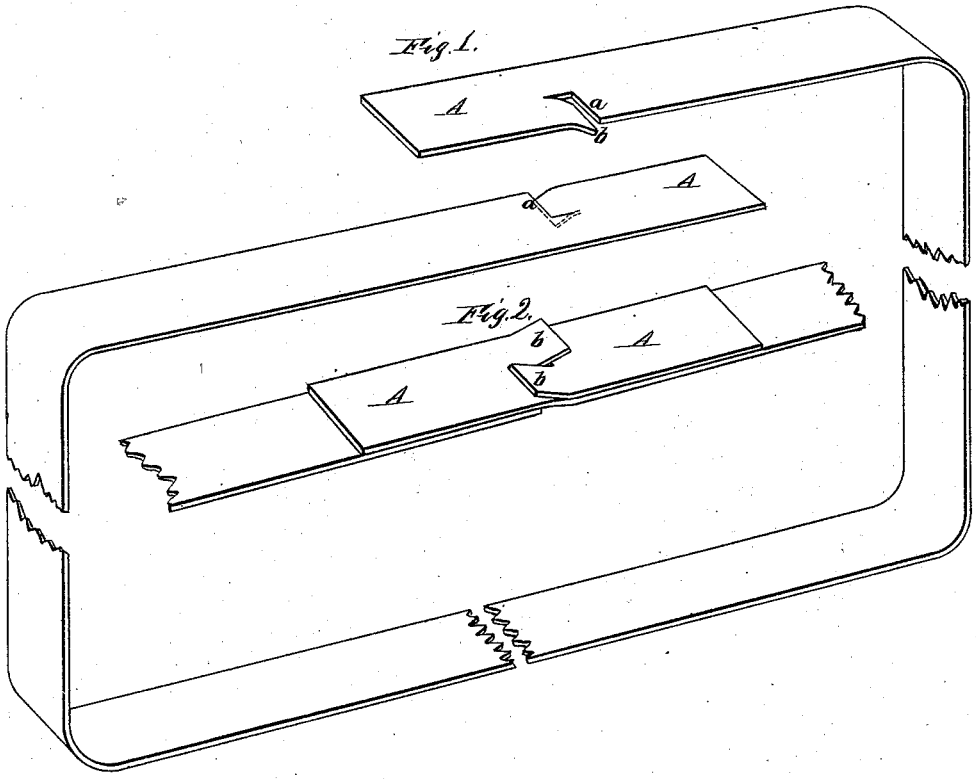

Fig. 2.

Fig. 3.

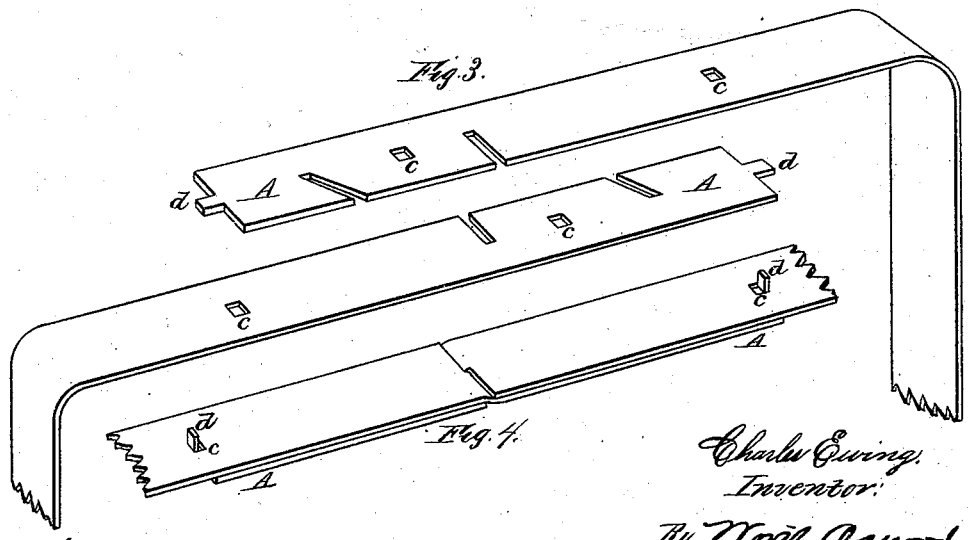

Fig. 4.

Witnesses:
Chas. H. Searle
D. R. Cowl

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UNITED STATES PATENT OFFICE.

CHARLES EWING, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **203,255**, dated May 7, 1878; application filed April 3, 1878.

To all whom it may concern:

Be it known that I, CHARLES EWING, of Washington, county of Washington, and District of Columbia, have invented certain new and useful Improvements in Bale-Ties, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a perspective view of a tie, showing slots cut in the sides, the ends being detached; and Fig. 2 is a similar view, showing the under side of the ends of the bale when cut, as in Fig. 1, and united. Fig. 3 is a perspective view of the separated ends of a tie having simple or inclined side slots, and the retaining tongues projecting from the ends. Fig. 4 is a similar view of the under side of the tie when the ends are united and cut, as in Fig. 3.

My present invention has relation to that class of bale-ties wherein the lock is formed by cutting or indenting each end of the hoop or band, dispensing with all additional buckles and extra pieces; and it consists, essentially, in preventing the lateral displacement of the two parts forming the lock by opposing a portion of the metal of the band to such displacement, as will be hereinafter first fully described, and then pointed out in the claim.

A A are the two ends of the hoop or band which are to be united, and each end is provided with one or more similarly-cut slots, extending as nearly as practicable one-half the width of the band, and located upon opposite edges of the band, so that when the ends are lapped one over the other the slots will be made to register in a manner readily understood.

If the engaging slots were simply cut at right angles to the edge of the metal they would hold the band against any longitudinal strain; but any force or pressure brought to bear against the tie in a direction perpendicular to either edge would tend to separate the two parts. To obviate this difficulty, without the necessity of applying any extra piece of metal as a separate loop or other device, I cut the slot *a* in a distance about equal to half the width of the band, and then, at right angles to this slot, I make a second cut toward the end of the band. This second cut need only be half as long as the first, or even one-quarter as long. The two cuts leave a narrow tongue, *b*, which I bend up toward the inner face of the hoop. Under this construction it will be observed that when the two ends of the band are locked together, as in Fig. 2, the two tongues *b b* are so located with respect to each other as that their inner edges abut, and they thus operate to prevent one end of the band from slipping out of the notch in the other end.

The two cuts may be made by any suitable instrument at one operation, and thus the expense of manufacture will be reduced to a minimum.

The same general object may be accomplished by perforating the bands at suitable intervals, as at *c c*, and cutting tongues *d d* upon the extremities. These tongues are bent up toward the outer face of the band, and when the two parts are united the tongues are inserted in the perforations provided for them, and may afterward be clinched, if desired.

Any number of slits may be employed under either form of construction, so that the band may be tightened, as circumstances may require. The two forms are similar in this—that the metal of the band, which is cut of the usual width, and slitted at the side, is made to oppose a projecting barrier to the lateral displacement of either end of the band; and this is the prominent principle of the invention, as before intimated. The bands thus improved are adopted for use in all situations where similar devices are ordinarily employed, and these need not be herein mentioned.

The side slit is advantageous in permitting the ready adjustment of the tie, as is commonly known.

I am aware of various forms of additional buckles, &c., which afford all the advantages of a side opening to receive the band; and I am also aware of the perforated band which receives the arrow-head, or other equivalent form, and of certain styles wherein rectangular notches are cut in the sides of the band in order to allow the two slitted ends to properly lap by each other, and to be so located as that they will, when in place, rest upon the side of the band next to the bale. This cutting

of the band not only weakens it but increases its expense slightly, as well as that it requires careful manipulation in adjusting, which my improved band does not. These old forms I do not desire to be understood as claiming herein.

What I do claim as new, and desire to secure by Letters Patent, is—

The herein-described bale-tie made of sheet metal in one piece, the same being provided with slits at the sides, adapted to receive and hold the uncut portions of the band, said band being also provided with projecting tongues which oppose a barrier to the lateral displacement of the ends when locked, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

CHARLES EWING.

Witnesses:
WORTH OSGOOD,
GEO. F. GRAHAM.